

Drawing Objections

The drawings were objected to under 37 CFR §1.83(a) as not showing every feature of the claimed invention. In particular, it was stated in the Office Action that the drawings do not show elliptical shape.

Applicants herein amend claims 20 and 23 to clarify that the cross-section shown in Figs 1 and 2 are oval and not elliptical. No new matter is added herewith. Applicants show claims 20 and 23 in their amended form in the Appendix in accordance with 37 CFR §1.121(c)(1)(ii). Accordingly, Applicants submit that this objection is overcome.

Rejection under 35 USC §103

Claims 1-7 and 19-24 were rejected as being unpatentable over newly cited U.S. Patent No. 2,292,469 to Olsen in view of U.S. Patent No. 4,094,248 to Jacobson and U.S. Patent No. 5,682,013 to Smith. Applicants respectfully traverse the rejection.

Olsen discloses a smokeless powder made from nitrocellulose, nitroglycerine, diphenylamine, and dibutylphthalate. Olsen discloses that a lower viscosity may be generated by increasing the amount of solvent.

Jacobson and Smith each teach various propellant shapes (e.g., shapes with external grooves, or cylindrical).

In contrast, claim 1 of the present invention recites a lacquer composition useful as a propellant, comprising, among other things, about 15 to 70 wt% of an organic solvent, from about 0.1 to about 2.5 wt% of a stabilizer, and nitrocellulose, wherein the lacquer composition has a viscosity of less than ten million centipoise when processed, and wherein the lacquer composition is processed into perforated propellant grains.

Applicants submit that the present invention is distinguishable from Olsen, Jacobsen, and Smith, taken individually or in combination. Olsen does not disclose or suggest use of 15-70 wt% of a solvent. Moreover, Olsen does not disclose or suggest that the propellant should have a viscosity of less than ten million centipoise when processed, as particularly claimed in claims 1 and 7.

Olsen further does not disclose or suggest processing the lacquer into perforated propellant grains. Jacobsen does not cure the deficiencies of Olsen because Jacobsen also does not disclose or suggest a lacquer composition made from about 15 to 70 wt% of an organic solvent, from about 0.1 to about 2.5 wt% of a stabilizer, and nitrocellulose, wherein the lacquer

composition has a viscosity of less than ten million centipoise when processed.

Like Jacobsen, Smith also does not cure the deficiencies of Olsen because Smith does not disclose or suggest processing the lacquer into perforated propellant grains, much less a lacquer composition made from about 15 to 70 wt% of an organic solvent, from about 0.1 to about 2.5 wt% of a stabilizer, and nitrocellulose, wherein the lacquer composition has a viscosity of less than ten million centipoise when processed. For the above reasons, Applicants submit that the present invention is not obvious over Olsen in view of Jacobsen and Smith taken individually or in combination, and that this rejection is overcome.

Applicants submit that the claims are in condition for allowance and respectfully request reconsideration and early favorable action by the Examiner.

If the Examiner believes a telephone conference would aid in the continued prosecution of this application, the Examiner is invited and encouraged to contact Applicants' representative at the telephone number listed below.

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The Examiner is authorized to charge any fees, or credit any overpayments, associated with this correspondence to Deposit Account 23-1665.

Respectfully submitted,

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APPENDIX

CLAIM AMENDMENTS UNDER 37 CFR §1.121(c)(1)(ii)

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Claims 20 and 23 are **REWRITTEN** as follows:

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20. (Twice Amended) The lacquer composition of claim 1, wherein said processed perforated propellant grains have an [elliptical]
oval cross-section.

23. (Twice Amended) The lacquer composition of claim 7, wherein said processed perforated propellant grains have an [elliptical]
oval cross-section.